

## **REMARKS**

With this response, no claims are amended or cancelled. Claims 36-39 are added.

Therefore, claims 1-39 are pending.

### **Objection to the Specification**

The paragraph beginning on page 2, line 5 was objected to as not having the filing date of the U.S. Patent Application listed as related. Applicant has amended this paragraph to supply the missing information. Therefore, Applicant respectfully requests that this objection be withdrawn.

### **Allowable Subject Matter**

Claims 12-19 are allowed.

Claims 2-3, 8, 23-27, and 31-35 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form. Applicant respectfully submits that all rejections to the claims from which these claims depend have been overcome herein. Therefore, Applicant submits that these claims are allowable as written. Therefore, Applicant respectfully requests that the objection to these claims be withdrawn.

### **Claim Rejections - 35 U.S.C. § 102**

Claims 1, 4, 6-7, 9-11, 20-22, and 28-30 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,471,647 issued to Gerlach et al. (*Gerlach*). Applicant respectfully submits that these claims are not anticipated by the cited reference for at least the following reasons.

Claim 1 recites the following:

determining an effective weight of a ghost signal; and

obtaining a downlink beamforming strategy as a function of the effective weight, the downlink beamforming strategy for transmitting a downlink signal to a receiver, wherein the downlink beamforming strategy provides an **interference mitigated region at a location susceptible to interference caused by the ghost signal.**

Claims 20 and 28 are independent claims that recite a similar limitation of mitigating a ghost signal.

The Office Action at page 2 asserts that "in this case, the ghost signal as claimed [reads] on the cross-talk in reference Gerlach." Applicants must respectfully disagree with this assertion. Crosstalk is the concept that a single, intended signal is transmitted by a transmitter, and is received by an unintended Remote User Terminal (RUT). The unintended RUT receives the signal that was intended for the intended RUT. Gerlach discusses mitigating crosstalk. See, e.g., col. 1, lines 39 to 42; col. 2, line 59 to col. 3, line 17. This concept is also discussed in the above-referenced patent application at page 7, line 22 to page 8, line 13.

In contrast to crosstalk, a ghost signal is an unintended signal, also transmitted by the transmitter, and is an image of the intended signal. The unintended ghost signal is an image of the intended signal offset slightly in time and/or frequency. A ghost signal may be caused, for example, by non-linearities in the transmitter. See Specification at page 27, lines 8 to 23. Thus, a ghost signal may be received by an unintended receiver (as with crosstalk), or by the intended receiver. Mitigation of ghost signals may thus include "nulling" the intended receiver and unintended receivers, as to the ghost signal.

Gerlach fails to disclose or suggest ghost signals or ghost signal mitigation, or providing an interference mitigated region at a location susceptible to a ghost signal, as claimed. Thus, Gerlach fails to disclose or suggest the invention as recited in the independent claims. Furthermore, because dependent claims necessarily include the limitations of the claims from

which they depend, Applicants respectfully submit that claims 4, 6-7 and 9-11, 21-22, and 29-30 are not anticipated by the reference for at least the reasons discussed above with regards to claims 1, 20, and 28, from which they depend, respectively.

#### **Claim Rejections - 35 U.S.C. § 103**

Claim 5 was rejected under 35 U.S.C. § 103(a) as being unpatentable over *Gerlach* in view of Official Notice taken that "ghost signals partially caused by intermodulation [signals] is known in the art." Whether or not ghost signals partially caused by intermodulation signals is known in the art, Applicants respectfully submit that the Office Action has failed to provide a proper rejection of claim 1, from which claim 5 depends. Therefore, Applicants submit that the cited reference fails to provide support for the rejection to claim 5.

#### **New Claims**

Although not previously presented for examination, and thus not subject to a rejection under *Gerlach*, Applicants here respectfully submit that new claims 36-39 are patentable over *Gerlach*. Independent claim 36 is directed to an apparatus with similar limitations as discussed above, including mitigating a ghost signal. Because *Gerlach* fails to disclose or suggest ghost signals, the reference would not provide support for a rejection of claim 36. Therefore, Applicants respectfully submit that claim 36 and claims 37-39, which depend from claim 36, are not anticipated nor suggested by the cited reference.

#### **Conclusion**

For at least the foregoing reasons, Applicant submits that all rejections have been overcome. Therefore, Applicant submits that all pending claims are in condition for allowance and such action is earnestly solicited. The Examiner is respectfully requested to contact the


undersigned by telephone if such contact would further the examination of the present application.

Please charge any shortages and credit any overcharges to our Deposit Account number 02-2666.

Respectfully submitted,  
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Date:

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